

ELECTRONIC JOURNALS

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ABSTRACT: The electronic journals are emerging on the internet. There are great expectations regarding the electronic journals but there are also barriers. The librarians have to take on a new tasks brought about by the electronic journals in the library. Implementing the full text electronic journal in the library requires the librarian to deal with selection, acquisition, licenses, and organizing in a very different way from what was required for the printed journal. Marketing and teaching the end-user is an important issue.

KEYWORDS: Electronic Journals, Libraries

The scholarly journal started in the 17th century. The scholarly community needed to communicate and publish research as quickly as possible. Journals represented a new way of thinking, the search for a new knowledge and the exchange of information. The quest for knowledge and new ideas did not end. The journals grew in numbers and caused what is known as the information explosion. Soon the publishers took over the task of publishing. Organizing the information became important and the librarians took over tasks such as indexing the journals, searching for the information as well as providing the end-user with the articles by interlibrary loans. After the journals grew in numbers the vendors played an important role in distributing the journals to make sure the journals would reach the reader. The printed journal has been published for three hundred and thirty three years. The writers, publishers, vendors, librarians and the reader have played an important roll in the success of the printed journal. The electronic journal is an opportunity to present information in a new and interesting way. There are great expectations regarding the electronic journal but there are also barriers. In my talk I will focus on the librarian and the electronic journal and the new tasks it has brought about in the library.

Why should the librarians provide full text electronic journals in the library?

First of all it is what our user wants. To keep our leadership role in the information world we have to supply them. If we do not do it our users will turn to other resources.

Timeliness/currency of information

The length of time between submission of the paper and its final appearance in a printed journal is a major concern for authors and publishers. It often takes from six months up to two years for the writer to have his work published from the time the article is submitted

for publication. We can add to the publication date one week up to three months until the journal reaches the reader depending on how it is delivered - by ship or by air. By providing access to the electronic full text our users can access the journal much sooner after publication.

Accessibility and availability

Electronic journals are always available both day and night and not only when the library is open. They do not get lost and there is not a pile of journals in the library to be re-shelved. The most recent issues can be read at home or at work and the user does not need to enter the library.

Support for distance education

For libraries that provide material to support distance education, can help the students by providing electronic access to journal resources.

Searchability

Full text journals provide the capability for searching text beyond the traditional bibliography database access points. The full text of journals are searchable but it depends on what format has been used for the text. It is important to know the difference between the formats to know what kind of searching can be done.

Most electronic journals are published in printed format and later made available by electronic means in two different formats that look similar, but are very different. The two different formats are the image format such as PDF *Portable Document Format* and ASCII format American Standard for Information Interchange. Only a few journals are published in electronic format directly on the Internet which is called electronic publishing.

Most journals are in image formats such as PDF. It is an exact replica of an article. The image is not searchable and links are hand-created and cannot be updated or changed when the publication changes, except by re-creation of the links. Image files are print-oriented and often do not display well on-screen. The image format requires a separate viewer to be installed into the browser such as Adobe Acrobat or Real Page. The other format is ASCII and it is the standard data transmission code for the representation of character via computer. It can be manipulated in any way that a computer program can manipulate data. SGML is an ISO standard for the creation of ASCII. SGML is a publishing standard, intended to use for publishing process, but publishers are taking some time to convert from their current electronic typesetting processes to SGML. PDF format is a favorite for publishers, as it is possible to define different security levels for a PDF file. Changing of the document can be denied, printing can be denied, etc. For material to be read on screen the HTML format (hypertext markup

language) is used. HTML is the subset of SGML and is used for displaying documents in Web browsers. Articles in SGML or HTML are searchable and links can be embedded.

It is very difficult to translate from one format to another; therefore if the publishers use HTML format on the Internet and the printed text is in PDF format all the text has to be retyped. The format used has to be decided from the beginning.

Major issues and Barriers

The major issues and barriers in providing full text electronic journals in our libraries are:

Cost

The journal subscriptions cost, for the printed journal, has been very high in libraries in recent years and subscription prices have gone up steadily. At the same time library budgets have been reduced. Many libraries have canceled important subscriptions. Librarians expected the subscription cost to go down with the electronic journal, but it is not likely that it will happen.

Publishers have offered subscribers to the paper version access to the electronic version at no extra charge for a trial period. Now for most journals that trial period is over and the prices the libraries are paying are higher than before. Most publishers are selling a joint subscription for the printed and the electronic version and this joint subscription price is 10% higher than for the printed journal subscription. Librarians would like to have the choice of subscribing to the electronic journal only and pay less, e.g., 80% of what they pay now for the printed version. This price is based on a calculation that states that the electronic journal is 20% less in production cost than the printed journal. The cost for journal subscriptions at the libraries is already too high and many libraries have difficulties subscribing to all the journals they subscribe to. If the electronic version will be more expensive it is difficult to justify a subscription to the electronic version of the journal if that version does not offer a better product than the printed one.

Copyright

Today it is the publisher who owns the article, not the writer and not the institution who paid the writer for his work. It is prestigious for the writer to get his article published in a respected journal. The writer is eager to get his work published so when the publisher gives him an agreement to sign where he gives away the copyright to the publisher he does so without any thoughts. Very few writers know it is enough to agree only on a site license for the printed text. When we talk about free access to articles on the net it is usually the copyright fee that stands in the way. Copyright fees that are paid to the publisher. If the author did not give away the copyright to the publisher he could have rights over the use of the article in forms other than printed. Issues, such as fair use are in the hands of the publishers. Information about fair use can be found on the home page of the publishers. Many publishers have not yet made distinction between print and electronic form regarding fair use. The only thing which is universal about copyright,

from the publisher's standpoint, is that fair use is virtually always interpreted as applying strictly within the institution, and any distribution of copies such as interlibrary loan outside of the institution is prohibited.

Archiving

Access to older journals is important. Until now, libraries have shouldered the responsibility to preserve and make older journals accessible, often providing expensive housing and facilities. Librarians have invented a network of libraries to share the journal collection of each library so readers in different countries can access the journals. Publishers have not taken any responsibility to preserve the older journals. Is this role going to change now with electronic journals? Are publishers or vendors going to store the electronic version of the journals on their computers and make them accessible in the future or are libraries going to carry on the responsibility of archiving the journals?

Many librarians have pointed out that publishers should store both new and older journals on their computers. But it will create problems. If the archiving is in the hands of the publishers the journal collection has to be accessed from many different publishers creating a lot of work for the librarian in linking to the journals in many different locations. The publisher might go out of business or merge with other companies. What if the library cancels its subscription, can the library still access the older part of the subscription that the library used to subscribe to? The publishers are not eager to store older journals and are happy to leave that task to the libraries. Vendors have offered storage of older journals and publishers and vendors have been looking into this issue together.

It is most likely that the libraries are going to shoulder this responsibility as with the printed journals.

If libraries are going to do this in each library the computer storage for the journals is very expensive. The libraries have to join forces and share computing resources for this purpose. This is a very important issue and it would be worth the effort to look into how many libraries could share a joint server for this purpose. Could it be done nationwide or for the whole of Scandinavia, for example? If libraries in Scandinavia could store these journals on one server and share the cost it would be possible for libraries with limited budgets to make use of this service. The server would provide access to large electronic collections and each library would have no local storage burden. If all the articles are stored this way in the future, tasks like inter-library loans and photocopying would no longer be needed except for older journals published before the electronic journal era providing the copyright issue and the ownership rights are solved.

Implementing the full text electronic journal in the library

Libraries and library staff have recognized the need to respond to the changing environment electronic publication creates. Many tasks performed by the serial librarian

require evaluation and redefinition. To ensure that he can meet these new challenges retraining is important.

Selection

It is a different selection process than with printed journals. How are we going to select electronically published journals for the library? When selecting printed journals we have relied on, among other things, quality control provided by publishers and authors.

The publication time is comprised of two main elements: the peer review process and the production process. The period from the time the author sends the article to the publisher until the article enters the production process is used for quality control. The publisher asks a specialist within the same field as the author to review the article. Many publishers use closed peer review. When this is the case the name of the author is not made known to the reviewer and the name of the reviewer is not known to the author. In this way the reviewer is protected and the writer's work is judged fairly. Only 10% of articles sent in for publication are published without any alteration. Most articles are sent back to the author and he/she is asked to make changes or the article is not accepted. Sometimes an article is not accepted because a similar work has just been published. In this way, the publisher is not only controlling the quality of the work but also the number of articles being published. It is the publisher who selects what is made available to the reader, acting as the primary information gatekeeper. When selecting a journal that has been published directly on the net by the authors can we trust the quality? Has the article been reviewed? How do we keep up with the changes made on the article? It is easy for the author to change the text directly on the net.

When selecting the electronic journal for the library the journals are sometimes made available only with a group of journals not just the journal you needed for the library collection, so instead of selecting one journal at one given time the librarian has to select a group of journals.

Acquisitions

Regarding acquisitions, special attention must be given to a different method of acquisitions and determine what will be best for the serials budget. These are: purchase or lease; stand-alone; university libraries; or consortium; working relationship with your current serials vendor.

Licenses

Assessing and negotiating licenses is a difficult and new task for the serial librarian. They have to take a new look at the key issues of copyright and ownership of an electronic text. Ownership rights have to be negotiated with the publishers. Most publishers have a ready-made agreement for the librarian to sign but it is very important that the librarian read the agreement and ask for changes in the agreement if needed.

Marketing

Marketing is also an important task in the library.

If electronic journals fail to reach the readers they will not survive. A recent study shows that electronic journals are not widely used.

Teaching the end-user

Motivating our users is very important. Libraries are identified as key agents in the provision of training in the use of electronic resources. The aim is to increase the number of users who are comfortable with new technologies and assist them in coping with current electronic developments. Readers have to access and accept the electronic journals and the technology needed to do so. Computer literacy is not widespread, even in the United States. On-line running costs are often high and many do not have the equipment necessary nor the finances needed to buy computers. So it is important that the libraries are well equipped to provide facilities for users who do not own computers. Some users can not get used to subject searching and if that is the case we have to be flexible in our methods of teaching. Some users will always use text searches.

Until now the readers have been scholars in the same field who have the knowledge to read the work but with the e-journal the article reaches not only the scholars but also the lay person who might misunderstand the content. The librarian can teach the user how to select and learn to judge what is a reliable source of information.

Access and organizing

There are different access models in use today, some in libraries, others with subscription agents and publishers. The provision of access can be provided for in three ways:

- Remote access to vendor or publisher;
- Local access to the library server;
- Remote access to a library or consortia.

Many publishers are now publishing their journals both in print and electronic versions. A reliable access to the electronic journal is very important and many publishers have launched homepages on the Internet where their electronic journals are accessible to the subscriber. What publishers are doing today is to give access to newly published electronic journals but so far they are not providing access to articles on a chosen subject both in new and older journals.

Many publishers are working on different projects such as IDEAL and LINK to make the electronic version of their printed journals accessible to their readers.

The subscription agents are also creating electronic warehouses that offer search possibilities and document delivery in addition to traditional services. The tendency is now that publishers and vendors are working together on different access models.

Libraries that mount the journals locally have to use a server that is often run by the library. Usually only part of the collection is stored locally such as a collection from database providers like OVID.

Remote access to an-other library or consortia is a solution many are considering today.

Finding the full text

The libraries and the publishers use alphabetical or subject list of journals for better access.

It is difficult for the reader to access journals from many different publishers. To make this easier the library has created one site where its users can access all the journals the library subscribes to. Libraries use their homepage on the Internet to make this possible. The library produces a list of all the journals and makes a link to the full text of the journal. This list is often both an alphabetical list and a subject list. Subscription agents such as Ebsco or Swets are beginning to provide this kind of service to the libraries. It is a great task to create all the links to the many different journals that the library subscribes to and to maintain the links if the URL (*Uniform Resource Locator*) changes for the journal. The libraries that subscribe through these subscription agents can ask for a file including their journal subscriptions to place on their homepage with a link to the full text of the journal.

To find a full text articles on a selected subject the best way is to do a literature search through databases and after that link to the full text. The database providers such as OVID or Silver Platter have provided a very user-friendly software interface. Users can do advanced searches and then select how much text they want to read: the title, abstract, contents of the journal or the full text article; and from the references of the full text they find links to articles on related subjects.

The links to full text of e-journals is also done through local online catalogues (OPACs). In order to make it work the library systems have to be searchable over the World Wide Web - something that many library systems do today. The user searches for the journal according to subject or title and when an entry is found a link is made to the full text of the journal.

Some journals like NEJM have started classifying articles according to subjects. It is an interesting project and users can easily access full text articles on subjects such as breast cancer. It might be easier for the user to access subjects in this way and in the future a link could be made to other full text journals on the same subject.

The problem of passwords has to be solved to improve access. Libraries who assign passwords to their library users know how time consuming this is. To use different passwords to access different full text e-journals is impossible for the user. Instead of passwords, publishers have found an easier way that might solve part of the problems. They use the name of the library server as an ID for the library users. An institution

should need only one password for all users to access all subscriptions. The use would be restricted to the IP address of the subscribing institution. Outside access can only be done with a password, so in most cases it has to be a combination of an IP address and passwords to provide access to users both within and outside the library.

Librarians from the 17th century worked in libraries where there were only books and manuscripts, books with a body of knowledge that had not changed much over the centuries. At that time a doctor could read in his lifetime all that had been written in medicine. Then journals emerged with a body of knowledge that kept changing all the time as knowledge increased. Not only did journals become outdated over a short period of time but they were also published in parts and grew in number so it was hard to find a space for them in the library. These librarians had to face changes that were not easy to solve at that time. Changes are always hard. There are too many questions and not enough answers yet. The electronic journal is a part of the very exciting electronic world of information. It is best to join in and enjoy the journey into the future and hope the answer will be waiting for us in the 21st century.

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